UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/500,356	02/07/2000	Tetsujiro Kondo	450100-02329	2482

20999 7590 05/09/2005

FROMMER LAWRENCE & HAUG
745 FIFTH AVENUE- 10TH FL.
NEW YORK, NY 10151

EXAMINER	
MARIAM, DANIEL G	

ART UNIT	PAPER NUMBER
2621	

DATE MAILED: 05/09/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	09/500,356	KONDO ET AL.	
	Examiner	Art Unit	
	DANIEL G. MARIAM	2621	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

riod for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

tatus

1)☒ Responsive to communication(s) filed on *September 13, 2004*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-19* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-19* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

Response to Arguments

1. Applicant's arguments, see page 2 of the remarks, filed December 2004, with respect to the rejection(s)of independent claim(s) 1 and 19 under 35 U.S.C (102 & 103) have been fully considered and are persuasive. Therefore, the rejection has been withdrawn. However, upon further consideration, a new ground(s) of rejection is made in view of Mancuso, et al. (6,285,801) which will be discussed in the rejection below.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –
>
> (e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

2. Claims 1 and 19 are rejected under 35 U.S.C. 102(e) as being anticipated by Mancuso, et al. (6,285,801).

3. With regard to claim 1, Mancuso, et al discloses input means, i.e., line memories, for receiving input data representative of a plurality of pixels arranged in a sequential order, (which corresponds to 1, 2, 3, 4, 5, ... 32, for example) (See item 102, in Fig. 1; col. 3, line 64 through col. 4, line 13; and Fig. 2); extraction means, i.e., global metric extractor, for extracting from the input data similar input data having a value close to, i.e., local metrics related to the target pixel or degree of edginess, a value of given input data, i.e., target pixel "302i", and processing means

(the global metric extractor is also used for processing/analyzing the pixels) for processing the input data according to the similar input data extracted by said extraction means (See col. 4, line, 4 through col. 5, line 51), wherein the input data to be processed is set as the given input data sequentially (See for example, Figure 3).

Claim 19 is rejected the same as claim 1 except claim 19 is a method claim. Thus, argument similar to that presented above for claim 1 is equally applicable to claim 19.

Claim Rejections - 35 USC § 103

4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

5. Claims 2-18 are rejected under 35 U.S.C. 103(a) as being unpatentable over Mancuso, et al. (hereinafter "Mancuso") in view of Sun, et al. and further in view of Li, et al. (5,602,934).

6. With regard to claim 2, Mancuso discloses all of the claimed subject matter, as already discussed above in paragraph 3, and incorporated herein by reference. While Mancuso does not expressly call for wherein said extraction means extracts the similar input data by applying a weight to the input data according to a difference between the input data and the given input data. However, Li, et al. (col. 7, lines 22-50) teaches this feature. Therefore, it would have been obvious to one having ordinary skill in the art to incorporate the teaching as taught by Li, et al into the system of Mancuso, if for no other reason than to apply a weight based on a difference between the input data and the given input data, and to do so would at least improve the

extraction process of the location where neighboring pixels having a local metric or degree of edginess corresponding to the target pixel data exist.

With regard to claim 3, a data processing apparatus according to claim 2, wherein said extraction means applies a weight to the input data by multiplying the input data with a predetermined weight function (See for example, col. 7, lines 43 –60 Li, et al; and see col. 4, lines 33-35 of Mancuso).

With regard to claim 4, a data processing apparatus according to claim 3, further comprising setting means for adaptively setting the weight function (See for example, col. 8, lines 46-52; and item 28, in Fig. 1 Li, et al).

With regard to claim 5, a data processing apparatus according to claim 4, further comprising estimation means for estimating a level of noise contained in the input data, wherein said setting means sets the weight function according to the estimated level of noise (which reads on col. 8, lines 49-52 Li, et al), for example.

With regard to claim 6, a data processing apparatus according to claim 1, wherein said processing means calculates the output data by adding the similar input data which are weighted according to temporal or spatial proximity between the similar input data and the given input data (See for example, col. 7, lines 36-53 Li, et al).

With regard to claim 7, a data processing apparatus according to claim 6, wherein said processing means applies a weight to the similar input data by multiplying the similar input data with a predetermined weight function (See for example, col. 7, lines 43 –60 Li, et al).

With regard to claim 8, a data processing apparatus according to claim 7, further comprising setting means for adaptively setting the weight function (See for example, col. 8, lines 46-52; and item 28, in Fig. 1 Li, et al).

With regard to claim 9, a data processing apparatus according to claim 8, further comprising estimation means for estimating a level of noise contained in the input data, wherein said setting means sets the weight function according to the estimated level of noise (which reads on col. 8, lines 49-52 Li, et al), for example.

With regard to claim 10, a data processing apparatus according to claim 1, wherein said extraction means extracts the similar input data from the input data based on a difference between the input data and the given input data (See for example, item 506, in Fig. 5 Li, et al).

With regard to claim 11, a data processing apparatus according to claim 1, wherein said extraction means extracts input data which is temporally or spatially close to the given input data as the similar input data (See for example, col. 7, lines 36-53 Li, et al).

With regard to claim 12, a data processing apparatus according to claim 1, wherein said extraction means extracts input data, as the similar input data, whose difference from the given input data is within a predetermined value (See for example, col. 7, lines 54-58 Li, et al).

With regard to claim 13, a data processing apparatus according to claim 12, further comprising setting means for adaptively setting the predetermined value (See for example, col. 8, lines 46-52; and item 28, in Fig. 1 Li, et al).

With regard to claim 14, a data processing apparatus according to claim 13, further comprising estimation means for estimating a level of noise contained in the input data, wherein

said setting means sets the predetermined value according to the estimated level of noise (which reads on col. 8, lines 49-52 Li, et al), for example.

With regard to claim 15, a data processing apparatus according to claim 14, wherein said estimation means estimates the level of noise based on a difference between the input data and the corresponding output data or based on a variance of the input data (See for example, items 506-518, in Fig. 5 Li, et al).

With regard to claim 16, a data processing apparatus according to claim 1, wherein said processing means calculates the output data by performing approximate processing using the similar input data (See for example, col. 7, lines 12-35 Li, et al).

With regard to claim 17, a data processing apparatus according to claim 16, wherein said processing means performs the approximate processing according to a predetermined model, i.e., given image or original image (See for example, col. 7, lines 23-29 Li, et al).

With regard to claim 18, a data processing apparatus according to claim 17, wherein said processing means performs the approximate processing according to a model represented by a linear expression (col. 9, lines 9-12 Li, et al).

Conclusion

7. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. U.S. Patent No. **5,796,876 (See for example, col. 1, line 63 – col. 2, line 5)**.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to DANIEL G. MARIAM whose telephone number is 571-272-7394. The examiner can normally be reached on M-F (7:00-4:30) FIRST FRIDAY OFF.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, BHAVESH M. MEHTA can be reached on 571-272-7453. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

DANIEL MIRIAM
PRIMARY EXAMINER
May 3, 2005